UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,213	03/12/2004	Kenji Okuyama	SUZ-31	8568

20311   7590   09/02/2010
LUCAS & MERCANTI, LLP
475 PARK AVENUE SOUTH
15TH FLOOR
NEW YORK, NY 10016

EXAMINER
RILEY, MARCUS T

ART UNIT	PAPER NUMBER
2625	

NOTIFICATION DATE	DELIVERY MODE
09/02/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

info@lmiplaw.com

	Application No.	Applicant(s)
Office Action Summary	10/800,213	OKUYAMA, KENJI
	Examiner	Art Unit	
	MARCUS T. RILEY	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>21 June 2010</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-28</u> is/are pending in the application.

    4a) Of the above claim(s) <u>1-20</u> is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>21-28</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>12 March 2004</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some * c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>04/28/2004; 09/25/2008</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This office action is responsive to applicant's remarks received on June 21, 2010. **Claims 21-28** are pending and **claims 1-20** have been cancelled.

Response to Arguments

2.   Applicant's arguments with respect to amended **claims 1 & 27**, filed on June 21, 2010 have been fully considered but they are not persuasive.

A: Applicant's Remarks

For Applicant's remarks see *"Applicant Arguments/Remarks Made in an Amendment"* filed June 21, 2010.

A: Examiner's Response

Applicant argues that the cited references does not disclose wherein the receiving buffer management section controls a speed of the receiving processing based upon an amount of print data stored in the receiving buffer.

Examiner understands Applicant's arguments but respectfully disagree. Shima either alone or in combination with Emoto teach, disclose or suggest the Applicant's invention. Shima at Column 3, lines 50-61; Column 12, line 46 thru column 13, line 7; and Column 10, line 65 thru Column 11, line 24 discloses a Capacity Limit Recognition Means, part of the Storage Management Task 81, not shown. If intermediate print information prepared from the print

information and stored in the storage means exceeds a predetermined capacity, the capacity limit recognition means sets the intermediate print information as a cluster of intermediate print information and informs the print management means of the fact and temporarily stops the write processing. For example, intermediate print information is stored in the storage means and the available storage limit in which information cannot be stored any more is reached. At this point, a cluster exists no jobs can be prepared. Thus, the receiving temporarily stops. Examiner interprets the "stopping" as a change in speed of receiving buffer. In other words, the storage means containing the auxiliary storage 45 becomes full before all print information is stored as a cluster of intermediate print information. In this case, a trigger defined by the available memory capacity of the storage means is set, the intermediate print information already stored in the storage means is used to perform print processing in any desired page order according to the trigger, and at the termination of the processing, the remainder received during the processing, converted into intermediate print information, and stored in the storage means is processed, whereby although copies of a print sorted in the desired page order to the last Nth page cannot be provided, a print can be provided in the correct page order for each predetermined unit determined from the available storage capacity of the storage means.

As a result, Shima either alone or in combination with Emoto teaches, discloses or suggests the applicant's claimed invention. Thus, claims are not patentable over the cited references taken alone or in combination.

Accordingly, it is respectfully submitted that the application is not in condition for allowance.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   **Claims 21-28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shima et al. (US 6,104,498 hereinafter, Shima '498) in combination with Emoto (US 6,788,430 hereinafter, Emoto '430).

Regarding claim 21; Shima '498 discloses a print data processing apparatus (Fig. 1, Printer 3) comprising: (i.e. Fig. 1 shows an image information print system. Column 5, lines 18-19);

a receiver (Fig. 10, Reception Task 71) for receiving print data (i.e. The reception task 71 starts processing upon reception of the data at step T1, performs data reception processing at step T2 of Fig. 11. Column 12, lines 46-49);

a receiving buffer (Fig. 10, Reception Buffer 83) for temporarily storing the print data received by the receiver (Fig 11, Step T2 i.e. When data is transmitted from the host 1, first the reception task 71 starts processing upon reception of the data at step T1, performs data reception processing at step T2, and stores the received data in the reception buffer 83. Column 12, lines 47-49);

a receiving buffer management section (Fig. 10, Storage Management Task 81) which recognizes an amount of the print data in the receiving buffer (i.e. The storage management task 81 manages the storage limit of the storage means and if the storage means is about to reach the storage limit, the storage management task 81 informs the print management task 74 of the fact. Column 13, lines 3-8);

a receiving controller (Fig. 3, Engine Control 49) for temporarily stopping receiving processing

of the print data performed by the receiver (Fig. 3, Engine Control 49 i.e., The controller 7 can send a print start

instruction via an I/O control circuit 48 to an engine controller 49 for the engine 11. Then, the intermediate print information is

temporarily saved in an image buffer existing in the RAM 44, then a wait is made for a DMA 51 to start. Column 7, lines 15-27).

an auxiliary storage device (Figs. 3 & 10, Auxiliary Storage 45) which can store the print data (i.e.

If print processing is delayed and data remains in the RAM 44 on a whole, some data is stored in the auxiliary storage 45.

Column 12, lines 63-67).

a write controller (Fig. 1, Controller 7) for controlling write processing to write the print data

stored in the receiving buffer into the auxiliary storage device (i.e. Controller 7 of Fig. 1, as illustrated in

Fig. 7, shows where the RAM 44 and the auxiliary storage 45 are virtually one body when viewed from the controller 7 and

intermediate print information is written into the virtual memory storage. Column 6, lines 47-63 and Column 12, lines 50-62);

wherein the receiving controller temporarily stopping the receiving processing of the

print data when the receiving buffer management section which recognizes that the free space in

the receiving buffer has run out, and resuming the receiving processing of the print data

performed by the receiver by canceling the temporary stopping processing when the receiving

buffer management section which recognizes that the free space in the receiving buffer is above

the predetermined value in a condition that the receiving processing of the print data is being

temporarily stopped (i.e. If intermediate print information is stored in the storage means and the available storage limit in

which information cannot be stored any more is reached, This is a cluster and 2 cases exist... (1) a case where no job cluster can

be prepared because of limit or (2) a case where one or more job clusters can be prepared can occur until the available storage

limit is reached. Column 10, line 65 thru column 11, line 38);

and wherein the write controller starting the write processing to write the print data stored

in the receiving buffer into the auxiliary storage device when the receiving buffer management

section which recognizes that the free space in the receiving buffer has run out and stopping the

write processing when the receiving buffer management section which recognizes that the free space in the receiving buffer is above a predetermined value by the print data being read from the receiving buffer before completion of the write processing (Fig. 10, Capacity Limit Recognition Means, part of the Storage Management Task 81 not shown. i.e. If intermediate print information prepared from the print information and stored in the storage means exceeds a predetermined capacity, the capacity limit recognition means sets the intermediate print information as a cluster of intermediate print information and informs the print management means of the fact and temporarily stops the write processing. Column 3, lines 50-61, Column 12, line 46 thru column 13, line 7);

when the write processing is completed, emptying the space of the receiving buffer where the print data written into the auxiliary storage device in this write processing has been stored (i.e. A trigger for conversion of the intermediate print information into a bit image is set as the storage capacity limit of the storage means and if the intermediate print information is converted into a bit image and the bit image is sent to the engine, an empty area of the storage means occurs. Column 11, lines 40-51).

wherein the receiving buffer management section controls a speed of the receiving processing based upon an amount of print data stored in the receiving buffer (i.e. For example, intermediate print information is stored in the storage means and the available storage limit in which information cannot be stored any more is reached. At this point, a cluster exists no jobs can be prepared. Thus, the receiving temporarily stops. Column 10, line 65 thru Column 11, line 24).

Shima '498 as modified does not expressly disclose the write controller destroying the print data written into the auxiliary storage device in write processing at this time from the auxiliary storage device.

Emoto '430 discloses the write controller destroying the print data written into the auxiliary storage device in write processing at this time from the auxiliary storage device (i.e. The print request managing task generates the print data and the storage data for each page, and the print execution task executes printing and transmits the print end report for each page, and sequentially delete data from the storage data stored in the auxiliary storage device. Column 5, lines 41-46).

Shima '498 and Emoto '430 are combinable because they are from same field of endeavor of printer systems (Emoto '430 at "Field of Invention").

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer systems as taught by Shima '498 by adding a write controller that destroys the print data as taught by Emoto '430. The motivation for doing so would have been because it advantageous to destroy unused print data in order to save space in the buffer. Therefore, it would have been obvious to combine Shima '498 with Emoto '430 to obtain the invention as specified in claim 1.

Regarding claim 22; Shima '498 discloses a wherein the receiving controller switches receiving processing of the print data to a fast receiving mode and a slow receiving mode in which the receiving processing is slower than in the fast receiving mode; and a suspend mode which suspends the receiving processing; and wherein when an amount of print data stored in the receiving buffer is below a first threshold value, the receiving controller sets the receiving processing into the fast receiving mode; and when the amount of print data stored in the receiving buffer has exceeded a second threshold value, the receiving controller sets the receiving processing into the slow receiving mode; and when the free space in the receiving buffer has run out, the receiving controller sets the receiving processing into the suspend mode; and when, in a condition of the suspend mode, the free space in the receiving buffer is below a third threshold value in which free space of a predetermined amount is generated in the receiving buffer, the receiving controller resumes the receiving processing of the print data by canceling the suspend mode (i.e. The storage management task 81 switches the receiving process to a faster or slower mode, suspends or temporarily stop the receiving process so that data can be saved and consumed efficiently by considering the

difference between the read time and the write time caused by the difference between the RAM 44 and the auxiliary storage 45, the print information transfer rate from the host, the print information processing (print information analysis to print execution) speed at the printer, and any other factors. Column 6, lines 47-63, Column 12, line 46 thru column 13, line 7).

Regarding claim 23; Claim 23 contains substantially the same subject matter as claim 21. Therefore, claim 23 is rejected on the same grounds as claim 21.

Regarding claim 24; Shima '498 discloses a developing unit (Fig. 1, Developing Unit 14) for reading the print data from the receiving buffer or the auxiliary storage device to develop the print data into image data (i.e. The Developing Unit reads the print data that has been formed on the photosensitive drum 17 received from the storage devices of the controller 7. Column 4, lines 16-29);

wherein, when the print data which has finished with the write processing is present in the auxiliary storage device the developing unit reads the print data in order of writing from the auxiliary storage device to develop the print data into image data (i.e. if print processing is delayed and data remains in the RAM 44 on a whole, some data is stored in the auxiliary storage 45 and then read into the RAM 44 and then the developing unit reads the print data from the storage Column 4, lines 16-29 and Column 12, lines 63-67);

and wherein, when the print data which has finished with the write processing is not present in the auxiliary storage device, the developing unit reads the print data from the receiving buffer to develop the print data into the image data (i.e. if print processing is delayed and data does not remain in the in the RAM 44 on a whole, some data is stored in the auxiliary storage 45 and then read into the RAM 44 and then the developing unit reads the print data from the storage Column 4, lines 16-29 and Column 12, lines 63-67);

Regarding claims 25 & 26; Claims 25 & 26 contains substantially the same subject matter as claim 24. Therefore, claims 25 & 26 are rejected on the same grounds as claim 24.

Regarding claim 27; Claim 27 contains substantially the same subject matter as claim 21. Therefore, claim 27 is rejected on the same grounds as claim 21.

Regarding claim 28; Claim 28 contains substantially the same subject matter as claim 24. Therefore, claim 28 is rejected on the same grounds as claim 24.

Conclusion

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARCUS T. RILEY whose telephone number is (571)270-1581. The examiner can normally be reached on Monday - Friday, 7:30-5:00, est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Marcus T. Riley
Assistant Examiner
Art Unit 2625

/MARCUS T. RILEY/
Examiner, Art Unit 2625

/Mark K Zimmerman/

Supervisory Patent Examiner, Art Unit 2625